Claims:

1. The use of compounds of formula I

$$\bigvee_{R=A}^{n} \bigcap_{N=Q}^{R} (I)$$

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wherein

Q is

$$N = \stackrel{NR^1R^2}{\underset{R^3}{\longleftarrow}}$$
,  $N = \stackrel{X^1}{\underset{R^3}{\longleftarrow}}$ , or  $\stackrel{R^4}{\underset{N}{\longleftarrow}}$ 

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X<sup>1</sup> is chlorine, bromine, or fluorine;

R<sup>1</sup>, R<sup>2</sup> are each independently hydrogen, C<sub>1</sub>-C<sub>10</sub>-alkyl, C<sub>3</sub>-C<sub>10</sub>-alkenyl, C<sub>3</sub>-C<sub>10</sub>-alkynyl, or C<sub>3</sub>-C<sub>12</sub>-cycloalkyl, C<sub>1</sub>-C<sub>6</sub>-alkylamino, di(C<sub>1</sub>-C<sub>6</sub>-alkyl)-amino, C<sub>1</sub>-C<sub>6</sub>-alkylcarbonylamino, C<sub>1</sub>-C<sub>6</sub>-alkylsulfinyl, or C<sub>1</sub>-C<sub>6</sub>-alkylsulfinyl, wherein the carbon atoms in these groups may be substituted with

1 to 3 halogen, hydroxy, nitro, cyano, amino, mercapto,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -haloalkoxy,  $C_1$ - $C_6$ -alkylthio,  $C_1$ - $C_6$ -haloalkylthio,  $C_1$ - $C_6$ -haloalkylsulfonyl,  $C_1$ - $C_6$ -haloalkylsulfinyl, or  $C_3$ - $C_6$ -cycloalkyl which may be substituted with 1 to 3  $R^\#$  groups, or

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R\* is halogen, cyano, nitro, hydroxy, mercapto, amino,  $C_1$ - $C_6$ -alkoxy,  $C_2$ - $C_6$ -alkenyloxy,  $C_2$ - $C_6$ -alkynyloxy,  $C_1$ - $C_6$ -haloalkoxy,  $C_1$ - $C_6$ -alkylthio, or  $C_1$ - $C_6$ -haloalkylthio,  $C_1$ - $C_6$ -alkylsulfinyl,  $C_1$ - $C_6$ -alkylsulfinyl,  $C_1$ - $C_6$ -alkylamino, di( $C_1$ - $C_6$ -alkyl-amino,  $C_1$ - $C_6$ -alkylcarbonyl,  $C_1$ - $C_6$ -alkoxycarbonyl, or di( $C_1$ - $C_6$ )-alkylaminocarbonyl;

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formyl,  $C_1$ - $C_6$ -alkylcarbonyl,  $C(=O)NR^aR^b$ ,  $CO_2R^c$ ,  $R^d$ ,  $R^e$ , phenyl which may be substituted with 1 to 3  $R^\#$  groups, or pyridyl which may be substituted with 1 to 3  $R^\#$  groups,

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R<sup>a</sup>, R<sup>b</sup>, R<sup>c</sup> are each independently hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl which may be substituted with 1 to 3 groups R<sup>#</sup>;

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R<sup>d</sup> is NR<sup>i</sup>R<sup>j</sup> or

$$N \stackrel{(CH_2)_p}{\swarrow} X_r$$
 or  $CH \stackrel{(CH_2)_p}{\swarrow} X_r$ 

R<sup>i</sup>, R<sup>j</sup> are each independently hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl which may be substituted with 1 to 3 groups R<sup>#</sup>;

- p, m are each independently 0, 1, 2, or 3, with the proviso that p and m are not both 0.
- X is oxygen, sulfur, amino,  $C_1$ - $C_4$ -alkylamino, or phenylamino, or, if p is 0 then X can also be phenoxy or  $C_1$ - $C_6$ -alkoxy;
- r is 0 or 1;

R<sup>e</sup> is

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R<sup>k</sup>, R<sup>q</sup> are each independently hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl which may be substituted with 1 to 3 groups R<sup>#</sup>; or

R1 and R2 may be taken together to form a ring represented by the structure

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p,m are 1, 2 or 3;

- X' is oxygen, sulfur, amino, C<sub>1</sub>-C<sub>4</sub>-alkylamino, phenylamino, or methylene;
- Z is  $C_1$ - $C_4$ -alkyl or phenyl;

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R<sup>3</sup> is hydrogen, C<sub>1</sub>-C<sub>10</sub>-alkyl, C<sub>2</sub>-C<sub>10</sub>-alkenyl, C<sub>2</sub>-C<sub>10</sub>-alkynyl, C<sub>3</sub>-C<sub>12</sub>-cycloalkyl, wherein the carbon atoms in these groups may be partially or fully halogenated or substituted with

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1 to 3 cyano, nitro, hydroxy, mercapto, amino,  $C_1$ - $C_6$ -alkyl,  $C_3$ - $C_6$ -cycloalkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -alkylamino, di( $C_1$ - $C_6$ -alkyl)-amino,  $C_1$ - $C_6$ -alkylsulfonyl, or  $C_1$ - $C_6$ -alkylsulfinyl groups, wherein the carbon atoms in these groups may be substituted by

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1 to 3 halogen atoms, a 5- to 6-membered aromatic ring system which may contain 1 to 4 heteroatoms selected from

5	oxygen, sulfur and nitrogen and which may be substituted with any combination of 1 to 5 halogen atoms, 1 to 3 $C_1$ - $C_6$ -alkyl, $C_1$ - $C_6$ -alkylthio, $C_1$ - $C_6$ -alkylsulfonyl, $C_1$ - $C_6$ -alkylsulfinyl, $C_1$ - $C_6$ -alkoxy, nitro, or cyano groups, wherein the carbon atoms in these groups may be substituted by 1 to 3 halogen atoms, or
10	phenoxy, which may be substituted with any combination of 1 to 5 halogen atoms, 1 to 3 $C_1$ - $C_6$ -alkyl, $C_1$ - $C_6$ -alkylsulfonyl, $C_1$ - $C_6$ -alkylsulfinyl, $C_1$ - $C_6$ -alkoxy, nitro, or cyano groups, wherein the carbon atoms in these groups may be substituted by 1 to 3 halogen atoms, or
15	a 3- to 6-membered saturated or partially unsaturated ring system which contains 1 to 3 heteroatoms selected from oxygen, sulfur and nitrogen and which may be substituted with any combination of 1 to 5 halogen atoms, 1 to 3 $C_1$ - $C_6$ -alkyl, $C_1$ - $C_6$ -alkylthio, $C_1$ - $C_6$ -alkylsulfinyl,
20	$C_1$ - $C_6$ -alkoxy, nitro, or cyano groups, wherein the carbon atoms in these groups may be substituted by 1 to 3 halogen atoms,
25	a 3- to 6-membered saturated or partially unsaturated ring system which contains 1 to 3 heteroatoms selected from oxygen, sulfur and nitrogen and which is unsubstituted or substituted with any combination of 1 to 5 halogen atoms, 1 to 3 C <sub>1</sub> -C <sub>6</sub> -alkyl, C <sub>1</sub> -C <sub>6</sub> -alkylthio, C <sub>1</sub> -C <sub>6</sub> -alkylsulfonyl, C <sub>1</sub> -C <sub>6</sub> -alkylsulfinyl, C <sub>1</sub> -C <sub>6</sub> -alkylsulfonyl, C <sub>1</sub> -C <sub>6</sub> -alkylsulfonyl, wherein the car-
30	bon atoms in these groups may be substituted by 1 to 3 halogen atoms;
_	R, R <sup>4</sup> are each independently hydrogen or C <sub>1</sub> -C <sub>6</sub> -alkyl, C <sub>1</sub> -C <sub>6</sub> -alkyl)-alkoxycarbonyl, C <sub>1</sub> -C <sub>6</sub> -alkylaminocarbonyl, or di(C <sub>1</sub> -C <sub>6</sub> -alkyl)-aminocarbonyl, wherein the carbon atoms in the these groups may be
35	substituted with 1 to 3 groups R#;

A is C-R<sup>5</sup> or N;

B is C-R<sup>6</sup> or N;

W is C-R<sup>7</sup> or N;

with the proviso that one of A, B and W is other than N;

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R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> are each independently hydrogen, halogen, nitro, cyano, amino, mercapto, hydroxy, C<sub>1</sub>-C<sub>10</sub>-alkyl, C<sub>2</sub>-C<sub>10</sub>-alkenyl, C<sub>2</sub>-C<sub>10</sub>-alkynyl, C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>6</sub>-alkylamino, di(C<sub>1</sub>-C<sub>6</sub>-alkyl)-amino, C<sub>1</sub>-C<sub>6</sub>-alkylthio, C<sub>1</sub>-C<sub>6</sub>-alkylsulfonyl, or C<sub>1</sub>-C<sub>6</sub>-alkylsulfinyl, wherein the carbon atoms in these groups may be substituted with 1 to 3 groups R<sup>#</sup>

a 5- to 6-membered aromatic ringsystem which may contain 1 to 4 heteroatoms selected from oxygen, sulfur and nitrogen and which may be substituted with any combination of 1 to 5 halogen atoms, 1 to 3  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -haloalkyl,  $C_1$ - $C_6$ -alkylsulfonyl,  $C_1$ - $C_6$ -haloalkylsulfinyl,  $C_1$ - $C_6$ -haloalkylsulfonyl,  $C_1$ - $C_6$ -haloalkylsulfonyl,  $C_1$ - $C_6$ -haloalkylsulfonyl,  $C_1$ - $C_6$ -haloalkoxy, mercapto, hydroxy, amino, nitro, or cyano groups, wherein the carbon atoms in these groups may be substituted with 1 to 3 groups  $R^{\#}$ ;

is hydrogen, halogen, cyano, nitro, amino, hydroxy, mercapto,  $C_1$ - $C_6$ -alkyl,  $C_2$ - $C_{10}$ -alkenyl,  $C_2$ - $C_{10}$ -alkynyl,  $C_3$ - $C_6$ -cycloalkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -alkylamino, di( $C_1$ - $C_6$ )-alkylamino,  $C_1$ - $C_6$ -alkylthio,  $C_1$ - $C_6$ -alkylsulfinyl, or  $C_1$ - $C_6$ -alkylsulfinyl, wherein the carbon atoms in these groups may be substituted with 1 to 3 groups  $R^{\#}$ ;

n is 0, 1, or 2;

or the enantiomers or diastereomers, veterinarily acceptable salts or esters thereof, for combating parasites in and on animals.

2. The use according to claim 1 wherein the compounds of formula I are compounds of formula I-B

$$R^{7}$$
 $R^{5}$ 
 $R_{33}$ 
 $R_{32}$ 
 $R_{32}$ 
 $R_{32}$ 
(I-B)

wherein

R<sup>7</sup> is chlorine or trifluoromethyl;

R<sup>5</sup> and Y are each independently chlorine or bromine;

R<sup>2</sup> is C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>6</sub>-alkenyl, C<sub>3</sub>-C<sub>6</sub>-alkynyl, or C<sub>3</sub>-C<sub>6</sub>-cycloalkyl which may be substituted with 1 to 3 halogen atoms, or C<sub>2</sub>-C<sub>4</sub>-alkyl which is substituted by C<sub>1</sub>-C<sub>4</sub>-alkoxy;

- R<sup>31</sup> and R<sup>32</sup> are C<sub>1</sub>-C<sub>6</sub>-alkyl or may be taken together to form C<sub>3</sub>-C<sub>6</sub>-cycloalkyl which may be unsubstituted or substituted by 1 to 3 halogen atoms;
  - R<sup>33</sup> is hydrogen or C<sub>1</sub>-C<sub>6</sub>-alkyl,
- or the enantiomers or veterinarily acceptable salts thereof.
  - 3. The use according to claims 1 or 2 wherein the compound of formula I is a compound of formula I-1.

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4. The use according to claims 1 or 2 wherein the compound of formula I is a compound of formula I-2.

- 20 5. The use as claimed in claims 1 to 4 wherein the parasites are selected from the Diptera, Siphonaptera, and Ixodida orders.
  - 6. The use as claimed in claims 1 to 5 wherein the animals are cats or dogs.
- 7. A method for treating, controlling, preventing or protecting animals against infestation or infection by parasites which comprises orally, topically or parenterally administering or applying to the animals a parasiticidally effective amount of a compound of formula I as defined in any one of claims 1 to 4.
- 30 8. The method as claimed in claim 7 wherein the parasites are selected from the Diptera, Siphonaptera, and Ixodida orders.
  - 9. The method as claimed in claims 7 or 8 wherein the animals are cats or dogs.

10. A process for the preparation of a composition for treating, controlling, preventing or protecting animals against infestation or infection by parasites which comprises a parasiticidally effective amount of a compound of formula I as defined in any one of claims 1 to 4.

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